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10/675,218

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EXAMINER

WATT, CHRIS A

ART UNIT

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2174

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/675,218

Applicant(s)

YEHUDA ET AL.

Examiner

Chris Watt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to Amendment filed 11/03/2006.
2. Claims 1-42 are pending in this application. Claims 1, 17, 21, 37, 41 and 42 are the independent claims. In the instant amendment, no claims were added or cancelled. This action is made Final.
3. The text of those sections of Title 35 US Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 1-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grace et al. ("Grace" US Patent Application Publication No. 2004/0075680) in view of Richardson ("Richardson" US Patent No. 6,271,845).

Regarding independent claim 1, Grace discloses (FIGS. 4-5 of Grace) a method to support displaying management information in a graphical user interface (i.e. "graphical user interfaces for managing electronic networks", "managing large numbers of parameters associated with devices in such networks" [0010] of Grace), the method comprising: displaying a management information view (i.e. "generally provide a user with the ability to selectively display certain information" [0043] of Grace) that includes management information associated with at least one managed entity in a network (i.e. "may refer ... to any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace), displaying a menu (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043]-[0044] of Grace) associated with the management information view (i.e. "graphical user interface"

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400 and 500 in FIGS. 4 and 5, see also [0043]-[0044] of Grace), the menu including selectable options (i.e. "display items" selected from "available items" in FIGS. 4 and 5 of Grace) that correspond to respective functions selectively applied (i.e. "selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace) to the management information associated with the at least one managed entity (i.e. "may refer ... to any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace), identifying a selected option chosen from the menu (i.e. "display items" selected from "available items" in FIGS. 4 and 5 of Grace), producing a view by applying the respective function associated with the selected option to the management information associated with the at least one managed entity, the produced view including a presentation of the management information based on the applied respective function, and displaying the view on the graphical user interface (i.e. "selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace, demonstrated in display of information in FIGS. 6-17). Grace does not teach a drill down view, drill down functions, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface.

Richardson teaches a drill down view, drill down function, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface (i.e. col. 5 lines 13-19 of Richardson : " Therefore, according to the present invention, user-configurable group views allow an administrator

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of the network, upon noticing that an icon is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" via a user interface to the network device or service that is the subject of the critical event"). It would have been obvious to an artisan at the time of the invention to combine the drill down of Richardson with the management information GUI of Grace "to quickly display to the administrator of a managed network health problems associated with devices and services on the network and to provide the administrator with the capability to quickly respond to and correct pending network problems" (col. 4 lines 62-66 of Richardson)

Regarding dependent claim 2, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1, wherein the respective drill down function associated with the selected drill down option identifies a particular category in which to drill down to a lower level with respect to the management information associated with the at least one managed entity (i.e. col. 6 lines 4-7 of Richardson : " If the user of the system is already viewing the network objects of a particular group view or the health characteristics of a particular network object, for instance, the drill-down would commence at that level").

Regarding dependent claim 3, see the analysis of claim 2 above. Grace, in combination with Richardson teaches a method as in claim 2, wherein displaying a drill down menu includes: displaying the drill down menu (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043] of Grace-[0044] of Grace) to include drill down options associated with managed entities in a storage area network (i.e. "may refer ... to

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any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace; col. 8 lines 1-9 of Richardson : " The user-configurable group views described above allow an administrator of the network, upon noticing that an icon of a user interface of the NNM console is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" to the network device or service (object) that is the subject of the critical event and to then view an event or trap message associated with the critical event that is stored as a field of the network device or service effected by the critical event"), the drill down menu including at least one of the following drill down options: database, database file, file system, volume group, host device, HBA (Host Bus Adapter), storage device, pool, port/storage group, unallocated devices (i.e. hosts 124, 126 and 152, "It is understood that this is a very simplified view of a SAN 100 with representative storage devices and hosts coupled to the fabric 102. It is understood that quite often significantly more devices and switches are used to develop the full SAN 100" [0034] of Grace).

Regarding claim 4, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1, wherein displaying a management information view (i.e. "generally provide a user with the ability to selectively display certain information" [0043] of Grace) includes receiving a selection of at least one managed entity icon (i.e. "expandable symbols that can be navigated to explore the structure of a network" [0012] of Grace) representing a corresponding at least one managed entity in the network (i.e. "may refer ... to any devices or software associated

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with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace), receiving a selection of a type of management information view in which to display management information associated with managed entities represented by the selected at least one managed entity icon (i.e. "display items" selected from "available items" in FIGS. 4 and 5 of Grace), and based on the selection of a type of management information view, applying a display function to the management information associated with the at least one managed entity in the network to graphically display the management information associated with the selected at least one managed entity icon (i.e. "selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace, demonstrated in display of information in FIGS. 6-17).

Regarding dependent claim 5, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1, wherein displaying a management information view includes maintaining a database of managed objects associated with managed entity icons (i.e. "the interconnections of such devices ... are stored" [0011] of Grace), the managed entity icons corresponding to managed entities of a storage area network (i.e. "expandable symbols 804 representing network devices and details 806 of a user selected symbol 808" [0056] of Grace), and upon detecting selection of at least one managed entity icon for producing a management information view (i.e. "expandable symbols that can be navigated to explore the structure of a network" [0012] of Grace), retrieving at least one corresponding managed object stored in the database associated with the selected at least one managed entity icon (i.e. "the

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interconnections of such devices ... are stored" [0011] of Grace) to identify the management information associated with the selection of the at least one managed entity icon (i.e. "to determine what devices are present in the network and the interconnections of such devices" [0011] of Grace, "determining ... the connection of a first set of devices to the first device" [0013] of Grace).

Regarding dependent claim 6, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1 further comprising allocating a first portion of a display screen to include a hierarchy of selectable icons representing managed entities of a storage area network (i.e. "expandable tree diagram 602 of expandable symbols 604 representing network devices" [0046] of Grace), allocating a second portion of the display screen to include the management information view associated with the at least one managed entity in the network (i.e. "expandable symbols 804 representing network devices and details 806 of a user selected symbol 808" [0056] of Grace), allocating a third portion of the display screen to display a detailed view including separately listed entries of management information for each of the at least one managed entity in the network displayed in the second portion of the display screen (i.e. "a Detail Option 652 could be similarly selected to provide additional detail in the Summary Window 606" [0049] of Grace, also note "My SAN Detail" in FIG. 8), and allocating a fourth portion of the display screen to include the drill down menu (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043]-[0044] of Grace; col. 9 lines 22-26 of Richardson : " Once the health characteristics of the network objects of interest have been defined and their health status determined, then

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the "drill down" process of proactively determining problem network objects of the managed network environment may commence").

Regarding dependent claim 7, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1 further comprising, in relation to the management information view (i.e. "generally provide a user with the ability to selectively display certain information" [0043] of Grace) including management information associated with the at least one managed entity in the network, displaying a detailed view of individually presented management information for each of the at least one managed entities (i.e. "selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace, demonstrated in display of information in FIGS. 6-17).

Regarding dependent claim 8, see the analysis of claim 7 above. Grace, in combination with Richardson teaches a method as in claim 7, wherein the management information in the management information view includes a single graph of collective management information associated with multiple managed entities of the network (i.e. "a summary display 606 is also included that provides information regarding the user selected symbol 608, which is in this example the symbol for the entire SAN", "option 662 has been selected, such that the Summary Window 606 displays general information regarding the items represented" [0048] of Grace, also note "My SAN Summary" in FIG. 7 and network summary graphics in FIGS. 2-3).

Regarding dependent claim 9, see the analysis of claim 7 above. Grace, in combination with Richardson teaches a method as in claim 7 further comprising

providing corresponding icons on the display screen to enable a user to selectively hide the management information view (i.e. "expandable symbols that can be navigated to explore the structure of a network" [0012] of Grace, "a user can select the type of information, the order of the items and the level of detail that is desired" [0043] of Grace).

Regarding dependent claim 10 see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1, wherein the management information in the management information view includes a single graph of collective management information associated with the at least one managed entity (i.e. "a summary display 606 is also included that provides information regarding the user selected symbol 608, which is in this example the symbol for the entire SAN", "option 662 has been selected, such that the Summary Window 606 displays general information regarding the items represented" [0048] of Grace, also note "My SAN Summary" in FIG. 7 and network summary graphics in FIGS. 2-3 of Grace).

Regarding dependent claim 11, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1 further comprising displaying path information in relation to the management information view, the path information including: i) an entry corresponding to a present drill down level view of the displayed management information in the management view (i.e. col. 6 lines 4-7 of Richardson : " If the user of the system is already viewing the network objects of a particular group view or the health characteristics of a particular network object, for instance, the drill-down would commence at that level"), and ii) at least one entry of a

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previous drill down level view (i.e. col. 8 lines 17-20 of Richardson : "the amount of drill-down that is required is a function of where in the hierarchy of maps and sub-maps the administrator is located when initially alerted to the presence of a network object in poor health") of previously displayed management information (reflected in "tree diagram" 602, i.e. "the graphical user interface includes an expandable tree diagram of expandable symbols that can be navigated to explore the structure of a network" [0012] of Grace, "additional layers of information may also be provided on the tree diagram 602" [0047] of Grace, "managing large numbers of parameters associated with devices in such networks" [0010] of Grace).

Regarding dependent claim 12, see the analysis of claim 11 above. Grace, in combination with Richardson teaches a method as in claim 11, wherein the at least one entry of the previous drill down level view may be selected by a user (i.e. col. 10 lines 3-6 of Richardson : " At Block 190, the administrator or other user of the network will select the one or more network objects of the group view having a health problem; this is the next step of the drill-down process") to change contents of the management information view back to a corresponding previously displayed management information view (i.e. "the Detail Option 852 of the Details display 806 is selected such that various details ... are provided with respect to the selected symbol 808 in the tree diagram 802" [0056] of Grace).

Regarding dependent claim 13, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1 further comprising highlighting a subset of drill down options in the drill down menu depending on which of

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the drill down options may be selected by a user to produce a next displayable drill down view (i.e. col. 8 lines 1-9 of Richardson : " The user-configurable group views described above allow an administrator of the network, upon noticing that an icon of a user interface of the NNM console is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" to the network device or service (object) that is the subject of the critical event and to then view an event or trap message associated with the critical event that is stored as a field of the network device or service effected by the critical event").

Regarding dependent claim 14, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1 further comprising displaying a hierarchy of managed entity icons that may be traversed based on use of a drill down technique (i.e. col. 8 lines 17-20 of Richardson : "the amount of drill-down that is required is a function of where in the hierarchy of maps and sub-maps the administrator is located when initially alerted to the presence of a network object in poor health"), and in relation to at least a portion of the managed entity icons in the hierarchy (i.e. "the Detail Option 852 of the Details display 806 is selected such that various details ... are provided with respect to the selected symbol 808 in the tree diagram 802" [0056] of Grace), providing a display region in relation to the managed entity icons to receive an input selection by a user of which management information to display for multiple selected managed entities of the network (i.e. "expandable symbols 804 representing network devices and details 806 of a user selected symbol 808" [0056] of Grace).

Regarding dependent claim 15, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1, wherein the drill down menu includes at least two sets of selectable drill down options (i.e. col. 7 lines 8-15 of Richardson : " These user-configurable group views allow an administrator of the network, upon noticing that an icon is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" to the network device or service that is the subject of the critical event and to then view an event or trap message associated with the critical event that is stored as a field of the network device or service effected by the critical event"), a first set of selectable drill down options related to storage features of a storage area network, a second set of drill down options related to host features of the storage area network (i.e. hosts 124, 126 and 152, "It is understood that this is a very simplified view of a SAN 100 with representative storage devices and hosts coupled to the fabric 102. It is understood that quite often significantly more devices and switches are used to develop the full SAN 100" [0034] of Grace, "a user can select the type of information, the order of the items and the level of detail that is desired", "may refer as examples, to any devices or software associated with a computer network" [0043] of Grace).

Regarding dependent claim 16, see the analysis of claim 1 above. Grace, in combination with Richardson teaches a method as in claim 1 further comprising in relation to the management information view including management information associated with the at least one managed entity in the network (i.e. "generally provide a user with the ability to selectively display certain information" [0043] of Grace),

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displaying a detailed view of individually presented management information for each of the at least one managed entities, enabling a user to individually select each of the at least one managed entity in the detailed view (i.e. "a Detail Option 652 could be similarly selected to provide additional detail in the Summary Window 606" [0049] of Grace, also note "My SAN Detail" in FIG. 8), and wherein producing a drill down view further includes applying the respective drill down function to management information associated with individually selected managed entities displayed in the detailed view (i.e. col. 5 lines 13-19 of Richardson : " Therefore, according to the present invention, user-configurable group views allow an administrator of the network, upon noticing that an icon is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" via a user interface to the network device or service that is the subject of the critical event").

Regarding independent claim 17, Grace teaches a method of displaying management information on a display screen (i.e. "the invention relates to graphical user interfaces for managing electronic networks ... storage area networks (SANs), and the like" [0010] of Grace), the method comprising, on a first portion of the display screen, displaying a vertical hierarchy of selectable icons representing managed entities of a storage area network (i.e. "expandable tree diagram 602 of expandable symbols 604 representing network devices" [0046] of Grace), on a second portion of the display screen, displaying a summary view of collective management information associated with at least two selected managed entities of the storage area network (i.e. "a summary display 606 is also included that provides information regarding the user selected

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symbol 608, which is in this example the symbol for the entire SAN", "option 662 has been selected, such that the Summary Window 606 displays general information regarding the items represented" [0048] of Grace, also note "My SAN Summary" in FIG. 7), on a third portion of the display screen, displaying a detailed view of separately listed management information for each of the at least two selected managed entities in the network (i.e. "a Detail Option 652 could be similarly selected to provide additional detail in the Summary Window 606" [0049] of Grace, also note "My SAN Detail" in FIG. 8), and on a fourth portion of the display screen, displaying a menu including multiple selectable options (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043] of Grace-[0044] of Grace) with respect to at least a portion of the management information displayed in the detailed view of separately listed management information (i.e. "i [sic] of Grace will be appreciated that the various options displays of the Summary display 606 can be configured by a user to display specific information desired (e.g., through the main menu 620, as illustrated by reference to FIGS. 2 and 3)" [0049] of Grace). Grace does not teach a drill down view, drill down functions, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface.

Richardson teaches a drill down view, drill down function, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface (i.e. col. 5 lines 13-19 of Richardson : " Therefore, according to the present invention, user-configurable group views allow an administrator of the network, upon noticing that an icon is indicative of a critical event having

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occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" via a user interface to the network device or service that is the subject of the critical event"). It would have been obvious to an artisan at the time of the invention to combine the management information method of Grace with the drill down of Richardson "to quickly display to the administrator of a managed network health problems associated with devices and services on the network and to provide the administrator with the capability to quickly respond to and correct pending network problems" (col. 4 lines 62-66 of Richardson)

Regarding dependent claim 18, see the analysis of claim 17 above. Grace, in combination with Richardson teaches a method as in claim 17, wherein displaying a drill down menu includes displaying the drill down menu to include drill down options (i.e. col. 10 lines 3-6 of Richardson : " At Block 190, the administrator or other user of the network will select the one or more network objects of the group view having a health problem; this is the next step of the drill-down process") associated with managed entities (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043]-[0044] of Grace) in a storage area network (i.e. "the invention relates to graphical user interfaces for managing electronic networks ... storage area networks (SANs), and the like" [0010] of Grace), the drill down menu including at least one of the following drill down options to drill down to a corresponding lower level with respect to displayed management information (i.e. col. 8 lines 17-20 of Richardson : "the amount of drill-down that is required is a function of where in the hierarchy of maps and sub-maps the administrator is located when initially alerted to the presence of a network object in poor

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health"): database, database file, file system, volume group, host device, HBA (Host Bus Adapter), storage device, pool, port/storage group, unallocated devices (i.e. hosts 124, 126 and 152, "It is understood that this is a very simplified view of a SAN 100 with representative storage devices and hosts coupled to the fabric 102. It is understood that quite often significantly more devices and switches are used to develop the full SAN 100" [0034] of Grace, "a user can select the type of information, the order of the items and the level of detail that is desired", "may refer as examples, to any devices or software associated with a computer network" [0043] of Grace).

Regarding dependent claim 19, see the analysis of claim 17 above. Grace, in combination with Richardson teaches a method as in claim 17, wherein the drill down menu includes at least two sets of selectable drill down options (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043] of Grace-[0044] of Grace), a first set of selectable drill down options related to storage features of a storage area network (i.e. col. 8 lines 1-9 of Richardson : " The user-configurable group views described above allow an administrator of the network, upon noticing that an icon of a user interface of the NNM console is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" to the network device or service (object) that is the subject of the critical event and to then view an event or trap message associated with the critical event that is stored as a field of the network device or service effected by the critical event"), a second set of drill down options related to host features of the storage area network (i.e. hosts 124, 126 and 152, "It is understood that this is a very simplified view of a SAN 100 with representative storage devices and

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hosts coupled to the fabric 102. It is understood that quite often significantly more devices and switches are used to develop the full SAN 100" [0034] of Grace, "a user can select the type of information, the order of the items and the level of detail that is desired", "may refer as examples, to any devices or software associated with a computer network" [0043] of Grace).

Regarding dependent claim 20, see the analysis of claim 17 above. Grace, in combination with Richardson teaches a method as in claim 17 further comprising on a fourth portion of the display screen, displaying path information path information including: i) an entry corresponding to a drill down view of presently displayed management information (i.e. col. 9 lines 22-26 of Richardson : " Once the health characteristics of the network objects of interest have been defined and their health status determined, then the "drill down" process of proactively determining problem network objects of the managed network environment may commence"), and ii) at least one entry corresponding to a previously displayed drill down view (i.e. col. 8 lines 17-20 of Richardson : "the amount of drill-down that is required is a function of where in the hierarchy of maps and sub-maps the administrator is located when initially alerted to the presence of a network object in poor health") of management information (reflected in "tree diagram" 602, i.e. "the graphical user interface includes an expandable tree diagram of expandable symbols that can be navigated to explore the structure of a network" [0012] of Grace, "additional layers of information may also be provided on the tree diagram 602" [0047] of Grace, "managing large numbers of parameters associated with devices in such networks" [0010] of Grace).

Regarding independent claim 21, Grace teaches a computer system supporting management information views associated with a storage area network (i.e. "the invention relates to graphical user interfaces for managing electronic networks ... storage area networks (SANs), and the like" [0010] of Grace), the computer system comprising a processor, a memory unit that stores instructions associated with an application executed by the processor, a communication interface that supports communication with other nodes of the storage area network, and an interconnect coupling the processor (i.e. "computing, data storage, and communications networks are just a few examples of networks for which new devices and methods of sharing data are continually developed and improved" [0004] of Grace), the memory unit, and the communication interface, enabling the computer system to execute the application and perform operations of displaying a management information view (i.e. "generally provide a user with the ability to selectively display certain information" [0043] of Grace) that includes management information associated with at least one managed entity in a network (i.e. "may refer ... to any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace), displaying a menu (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043] of Grace-[0044] of Grace) associated with the management information view (i.e. "graphical user interface" 400 and 500 in FIGS. 4 and 5, see also [0043] of Grace-[0044] of Grace), the menu including selectable options (i.e. "display items" selected from "available items" in FIGS. 4 and 5) that correspond to respective functions selectively applied (i.e. "selectively display certain information ... status variables or

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configurable settings of such devices or software" [0043] of Grace) to the management information associated with the at least one managed entity (i.e. "may refer ... to any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace), identifying a selected option chosen from the menu (i.e. "display items" selected from "available items" in FIGS. 4 and 5), producing a view by applying the respective function associated with the selected option to the management information associated with the at least one managed entity, the produced view including a presentation of the management information based on the applied respective function, and displaying the view on the graphical user interface (i.e. "selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace, demonstrated in display of information in FIGS. 6-17). Grace does not teach a drill down view, drill down functions, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface.

Richardson teaches a drill down view, drill down function, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface (i.e. col. 5 lines 13-19 of Richardson : " Therefore, according to the present invention, user-configurable group views allow an administrator of the network, upon noticing that an icon is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" via a user interface to the network device or service that is the subject of the critical event"). It would have been obvious to an artisan at the time of the invention to

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combine the management information computer system of Grace with the drill down of Richardson "to quickly display to the administrator of a managed network health problems associated with devices and services on the network and to provide the administrator with the capability to quickly respond to and correct pending network problems" (col. 4 lines 62-66 of Richardson)

Claim 22 differs from claim 2 only in that claim 22 is a computer system claim whereas, claim 2 is a method claim. Thus, claim 22 is analyzed as previously discussed with respect to claim 2 above.

Claim 23 differs from claim 3 only in that claim 23 is a computer system claim whereas, claim 3 is a method claim. Thus, claim 23 is analyzed as previously discussed with respect to claim 3 above.

Claim 24 differs from claim 4 only in that claim 24 is a computer system claim whereas, claim 4 is a method claim. Thus, claim 24 is analyzed as previously discussed with respect to claim 4 above.

Claim 25 differs from claim 5 only in that claim 25 is a computer system claim whereas, claim 5 is a method claim. Thus, claim 25 is analyzed as previously discussed with respect to claim 5 above.

Claim 26 differs from claim 6 only in that claim 26 is a computer system claim whereas, claim 6 is a method claim. Thus, claim 26 is analyzed as previously discussed with respect to claim 6 above.

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Claim 27 differs from claim 7 only in that claim 27 is a computer system claim whereas, claim 7 is a method claim. Thus, claim 27 is analyzed as previously discussed with respect to claim 7 above.

Claim 28 differs from claim 8 only in that claim 28 is a computer system claim whereas, claim 8 is a method claim. Thus, claim 28 is analyzed as previously discussed with respect to claim 8 above.

Claim 29 differs from claim 9 only in that claim 29 is a computer system claim whereas, claim 9 is a method claim. Thus, claim 29 is analyzed as previously discussed with respect to claim 9 above.

Claim 30 differs from claim 10 only in that claim 30 is a computer system claim whereas, claim 10 is a method claim. Thus, claim 30 is analyzed as previously discussed with respect to claim 10 above.

Claim 31 differs from claim 11 only in that claim 31 is a computer system claim whereas, claim 11 is a method claim. Thus, claim 31 is analyzed as previously discussed with respect to claim 11 above.

Claim 32 differs from claim 12 only in that claim 32 is a computer system claim whereas, claim 12 is a method claim. Thus, claim 32 is analyzed as previously discussed with respect to claim 12 above.

Claim 33 differs from claim 13 only in that claim 33 is a computer system claim whereas, claim 13 is a method claim. Thus, claim 33 is analyzed as previously discussed with respect to claim 13 above.

Claim 34 differs from claim 14 only in that claim 34 is a computer system claim whereas, claim 14 is a method claim. Thus, claim 34 is analyzed as previously discussed with respect to claim 14 above.

Claim 35 differs from claim 15 only in that claim 35 is a computer system claim whereas, claim 15 is a method claim. Thus, claim 35 is analyzed as previously discussed with respect to claim 15 above.

Claim 36 differs from claim 16 only in that claim 36 is a computer system claim whereas, claim 16 is a method claim. Thus, claim 36 is analyzed as previously discussed with respect to claim 16 above.

Regarding independent claim 37, Grace teaches a computer system for displaying management information views associated with a storage area network (i.e. "the invention relates to graphical user interfaces for managing electronic networks ... storage area networks (SANs), and the like" [0010] of Grace), the computer system comprising a processor, a memory unit that stores instructions associated with an application executed by the processor, a communication interface that supports communication with nodes of the storage area network and an interconnect coupling the processor (i.e. "computing, data storage, and communications networks are just a few examples of networks for which new devices and methods of sharing data are continually developed and improved" [0004] of Grace), the memory unit, and the communication interface, enabling the computer system to execute the application and perform operations of on a first portion of a display screen, displaying a vertical hierarchy of selectable icons representing managed entities of a storage area network

(i.e. "expandable tree diagram 602 of expandable symbols 604 representing network devices" [0046] of Grace), on a second portion of the display screen, displaying a summary view of collective management information associated with at least two selected managed entities of the storage area network (i.e. "a summary display 606 is also included that provides information regarding the user selected symbol 608, which is in this example the symbol for the entire SAN", "option 662 has been selected, such that the Summary Window 606 displays general information regarding the items represented" [0048] of Grace, also note "My SAN Summary" in FIG. 7), on a third portion of the display screen, displaying a detailed view of separately listed management information for each of the at least two selected managed entities in the network (i.e. "a Detail Option 652 could be similarly selected to provide additional detail in the Summary Window 606" [0049] of Grace, also note "My SAN Detail" in FIG. 8), and on a fourth portion of the display screen, displaying a menu including multiple selectable options (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043] of Grace-[0044] of Grace) with respect to at least a portion of the management information displayed in the detailed view of separately listed management information (i.e. "i [sic] of Grace will be appreciated that the various options displays of the Summary display 606 can be configured by a user to display specific information desired (e.g., through the main menu 620, as illustrated by reference to FIGS. 2 and 3)" [0049] of Grace). Grace does not teach a drill down view, drill down functions, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface.

Richardson teaches a drill down view, drill down function, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface (i.e. col. 5 lines 13-19 of Richardson : " Therefore, according to the present invention, user-configurable group views allow an administrator of the network, upon noticing that an icon is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" via a user interface to the network device or service that is the subject of the critical event"). It would have been obvious to an artisan at the time of the invention to combine the management information computer system of Grace with the drill down of Richardson "to quickly display to the administrator of a managed network health problems associated with devices and services on the network and to provide the administrator with the capability to quickly respond to and correct pending network problems" (col. 4 lines 62-66 of Richardson)

Claim 38 differs from claim 18 only in that claim 38 is a computer system claim whereas, claim 18 is a method claim. Thus, claim 38 is analyzed as previously discussed with respect to claim 18 above.

Claim 39 differs from claim 19 only in that claim 39 is a computer system claim whereas, claim 19 is a method claim. Thus, claim 39 is analyzed as previously discussed with respect to claim 19 above.

Claim 40 differs from claim 20 only in that claim 40 is a computer system claim whereas, claim 20 is a method claim. Thus, claim 40 is analyzed as previously discussed with respect to claim 20 above.

Regarding independent claim 41, Grace teaches a computer program product including a computer-readable medium having instructions stored thereon for processing data information (i.e. "computing, data storage, and communications networks are just a few examples of networks for which new devices and methods of sharing data are continually developed and improved" [0004] of Grace), such that the instructions, when canied out by a processing device, enable the processing device to perform operations of displaying a management information view (i.e. "generally provide a user with the ability to selectively display certain information" [0043] of Grace) that includes management information associated with at least one managed entity in a network (i.e. "may refer ... to any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace) displaying a menu (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043]-[0044] of Grace) associated with the management information view (i.e. "graphical user interface" 400 and 500 in FIGS. 4 and 5, see also [0043]-[0044] of Grace), the menu including selectable options (i.e. "display items" selected from "available items" in FIGS. 4 and 5) that correspond to respective functions selectively applied (i.e. "selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace) to the management information associated with the at least one managed entity (i.e. "may refer ... to any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace), identifying a selected option chosen from the menu (i.e. "display items" selected from "available items" in FIGS. 4 and 5), producing a

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view by applying the respective function associated with the selected option to the management information associated with the at least one managed entity, the produced view including a presentation of the management information based on the applied respective function and displaying the view on the graphical user interface (i.e.

"selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace, demonstrated in display of information in FIGS. 6-17). Grace does not teach a drill down view, drill down functions, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface.

Richardson teaches a drill down view, drill down function, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface (i.e. col. 5 lines 13-19 of Richardson : " Therefore, according to the present invention, user-configurable group views allow an administrator of the network, upon noticing that an icon is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" via a user interface to the network device or service that is the subject of the critical event"). It would have been obvious to an artisan at the time of the invention to combine the management information computer program product of Grace with the drill down of Richardson "to quickly display to the administrator of a managed network health problems associated with devices and services on the network and to provide the administrator with the capability to quickly respond to and correct pending network problems" (col. 4 lines 62-66 of Richardson)

Regarding independent claim 42, Grace teaches a computer system for supporting management information views associated with a storage area network (i.e. "the invention relates to graphical user interfaces for managing electronic networks ... storage area networks (SANs), and the like" [0010] of Grace), the computer system including means for displaying a management information view (i.e. "generally provide a user with the ability to selectively display certain information" [0043] of Grace) that includes management information associated with at least one managed entity in a network (i.e. "may refer ... to any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace), means for displaying a menu (i.e. "user selectable list" 402 and 502 in FIGS. 4 and 5, see also [0043]-[0044] of Grace) associated with the management information view (i.e. "graphical user interface" 400 and 500 in FIGS. 4 and 5, see also [0043]-[0044] of Grace), the menu including selectable options (i.e. "display items" selected from "available items" in FIGS. 4 and 5) that correspond to respective functions selectively applied (i.e. "selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace) to the management information associated with the at least one managed entity (i.e. "may refer ... to any devices or software associated with a computer network" [0043] of Grace, "other network aspects could also be provided" [0044] of Grace), means for identifying a selected option chosen from the menu (i.e. "display items" selected from "available items" in FIGS. 4 and 5), means for producing a view by applying the respective function associated with the selected option to the management information associated

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with the at least one managed entity, the produced view including a presentation of the management information based on the applied respective function and means for displaying the produced view (i.e. "selectively display certain information ... status variables or configurable settings of such devices or software" [0043] of Grace, demonstrated in display of information in FIGS. 6-17). Grace does not teach a drill down view, drill down functions, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface.

Richardson teaches a drill down view, drill down function, associating selected drill down options with entity management information, or displaying the drill down view on the graphical user interface (i.e. col. 5 lines 13-19 of Richardson : " Therefore, according to the present invention, user-configurable group views allow an administrator of the network, upon noticing that an icon is indicative of a critical event having occurred, as reflected in the color, shape, or other such indicator of the icon, to "drill down" via a user interface to the network device or service that is the subject of the critical event"). It would have been obvious to an artisan at the time of the invention to combine the management information GUI of Grace with the drill down of Richardson "to quickly display to the administrator of a managed network health problems associated with devices and services on the network and to provide the administrator with the capability to quickly respond to and correct pending network problems" (col. 4 lines 62-66 of Richardson).

Response to Arguments

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5. Applicants' arguments in the instant Amendment have been fully considered but they are not persuasive.

Applicants argued the following:

(a) The usefulness of Richardson is limited to showing the color of icons to indicate whether there is a health problem with one or more objects contained in containers, the drill down only applying to clicking on a series of icons until a message disclosing the cause of the health problem is displayed.

(b) Grace and Richardson, taken either singly or in combination, do not teach or suggest displaying a drill down menu including selectable drill down options.

(c) Richardson would have no reason to display drill down menus that include selectable drill down options.

(d) Richardson's technique for drilling down to a message does not involve drill down menus.

The Examiner disagrees for the following reasons:

Regarding (a), as quoted in previous Office actions, the usefulness of Richardson goes beyond simply viewing network problems, and is useful "to provide the administrator with the capability to quickly respond to and correct pending network problems" (i.e. see col. 4 line 62 et seq. of Richardson).

Regarding (b), as analyzed in the first office action, Grace is used as a reference to show that management information views associated with a storage area network has previously been disclosed in the art (i.e. seen in [0010] et seq. of Grace: "the invention relates to graphical user interfaces for managing electronic networks ...

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storage area networks (SANs), and the like"). Richardson is used as a reference to show that drill down menus are used "to "drill down" via a user interface to the network device or service that is the subject of the critical event" (i.e. see col. 5 line 13 et seq. of Richardson). As pointed out in the previous Office action, there is motivation to combine Richardson into Grace "to quickly display to the administrator of a managed network health problems associated with devices and services on the network and to provide the administrator with the capability to quickly respond to and correct pending network problems" (col. 4 line 62 et seq. of Richardson).

Regarding (c), see FIG. 2 et seq. of Richardson, in which a specific "level" of groups are seen in the group view (i.e. "USER OPENS A GROUP VIEW" 52) and information for that level is viewed (i.e. "LOOKUP CONTEXT SENSITIVE INFORMATION BY GROUP VIEW" 54), then specific menu options are modified based on this context sensitive information (i.e. "MODIFY MENU BAR, POP UP MENUS AND TOOLBARS FOR THAT GROUP VIEW" 56).

Regarding (d), see the analysis of (c) above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Watt whose telephone number is (571) 270-1046. The examiner can normally be reached on Monday-Thursday 6:30-4:00 Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chris A. Watt/

July 16, 2007

CAW

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